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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,993	02/06/2004	Antonio Gigola		7112

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EXAMINER

FLANIGAN, ALLEN J

ART UNIT	PAPER NUMBER
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3753

DATE MAILED: 12/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/773,993

Applicant(s)

GIGOLA, ANTONIO

Examiner

Allen J. Flanigan

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

Claims 14 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There is no proper antecedent basis in claims 12 and 15 (the claims from which the above rejected claims depend) for "the cardboard".

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5, 6, 8-13, 15, 16, 18, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshino et al.

Yoshino et al. shows a heat and moisture exchanger made of Japanese paper sheets alternated with corrugated Kraft paper spacers. It would appear, regarding claims 3, 6, et al., that the only distinction between "cardboard" as claimed, and Japanese or Kraft paper, is nominal. All are paper formations made of cellulose fiber, and although the term "cardboard" might arguably be

Art Unit: 3753

seen as implying a greater thickness, in fact it appears that cardboards of a thickness in the range of thicknesses disclosed in Yoshino et al. for Japanese and Kraft paper<sup>1</sup> are well known (see paragraph 72 of Evangelista et al.). Thus, the term cardboard, applied in a broad sense<sup>2</sup>, fails to patentably distinguish over what is taught in Yoshino et al.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 7, 14, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshino et al. in view of Sugiyama et al. and Asker et al.

The impregnation of paper sheets with resin in total heat exchangers is known as shown by Sugiyama et al. and Asker et al. Not only is it known to provide such resins for the formation of a composite, gas impermeable/moisture permeable film (see Sugiyama et al.), but it is also appreciated that such resin impregnation can serve to stiffen and strengthen the corrugated cellular structure of such exchangers (see lines 55-56 of column 1). In view of this, it would have been obvious to one of ordinary skill in the art

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<sup>1</sup> The stated basis weight of 70 and 120 grams given in column 7 of Yoshino et al., for example, corresponds to a thickness of approximately .14 mm and .25 mm, respectively, for the Japanese and Kraft papers. NOTE: It is clear that Yoshino et al. contains a typographical error, in that basis weight is typically given in grams per square *meter*, not centimeter. A sheet

Art Unit: 3753

at the time the instant invention was made to impregnate either or both paper sheets of Yoshino et al. with resin to obtain these advantages.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rasel is cited as an alternative to Evangelista et al. The remaining references of record concern various designs of total heat exchangers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen J. Flanigan whose telephone number is (571) 272-4910. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Mancene can be reached on (571) 272-4930. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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of 70 grams per square centimeter would weigh 700 kilos per square meter, which is clearly impossible.

<sup>2</sup> See MPEP 2111.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Allen J. Flanigan  
Primary Examiner  
Art Unit 3753

AJF